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## **Chapter 3—Approach**

This chapter describes the process by which the District's CWCS was developed and how the 8 Required Elements were met.

### **Timeline**

The timeline describes the progress of developing the CWCS in chronological order to meet the 8 Required Elements and the final deadline of October 1, 2005. It involves eight main components:

1. Drafting species lists
  - a. Master list of all species occurring within the District to serve as an historical database
  - b. List of species of greatest conservation need
2. Coordinating with other land managers and conservation groups in the District, including local and federal agencies and organizations and NGOs
3. Identifying priority habitats
4. Identifying threats to priority habitats
5. Identifying existing conservation actions and developing new ones
6. Developing monitoring protocols
7. Developing a timeline and process for review and revision
8. Developing a plan for public involvement

During Fall 2004, the staff of DC Fisheries and Wildlife Division created an outline for developing the District's CWCS. In November, staff identified and met with the Working Group of federal and state partners to explain the process and to solicit their expertise. (Later, representatives from NGOs became active in the Working Group). By the end of the first meeting, a set of criteria was developed from which to develop the list of species of greatest conservation need. Following that meeting, DC Fisheries and Wildlife Division staff drew up a first draft of that list. In subsequent meetings throughout Winter 2004, partners commented on and helped edit the list.

By February 2005, a final draft list was completed and the Working Group began to identify priority habitat types and locations. In April, specific threats to those habitats were identified. In May, existing conservation actions around the District were compiled and new ones were developed where there were gaps.

The first draft was prepared July 2005 and was available for review by the Working Group and the public. The second draft was prepared August 2005 and was again made available for review by the Working Group and the public. The final District CWCS was turned into the National Advisory Acceptance Team (NAAT) on October 1, 2005.

**Table 1. Timeline used to meet the 8 Required Elements**

	<b>Nov 2004</b>	<b>Jan 2005</b>	<b>Feb 2005</b>	<b>Mar 2005</b>	<b>April 2005</b>	<b>May 2005</b>	<b>June 2005</b>	<b>July 2005</b>	<b>Aug. 2005</b>
<b>R.E. #1</b>	1 <sup>st</sup> Working Group meeting, Master List and SGCN list	Final SGCN list							
<b>R.E. #2</b>			Identify key habitats						
<b>R.E. #3</b>				Identify threats	Threat charts				
<b>R.E. #4</b>						Conser- vation Actions	Conse- rvation Action	Conser- vation Actions	Conser- vation Actions
<b>R.E. #5</b>								Monit- oring plan	
<b>R.E. #6</b>								Process & timeli- ne	
<b>R.E. #7</b>	Coordinate with land managers	Coor- dinate with land mana- gers	Coordin- ate with land manage- rs	Coordin- ate with land manage- rs	Coor- dinate with land mana- gers	Coordin- ate with land manage- rs	Coord- inate with land mana- gers	Coord- inate with land manag- ers	Coord- inate with land manag- ers
<b>R.E. #8</b>				Public involve- ment strategies				First public review meeting	Second public review meeting

## **CWCS Development Process**

### **Roles and Groups**

#### ***CWCS Coordinator***—Ira Palmer

The role of the CWCS Coordinator is to oversee the development and implementation of the CWCS.

#### ***Internal Group***—DC Fisheries and Wildlife Division

The role of the Internal Group is to develop and implement the CWCS. Tasks of the group included, but were not limited to:

- drafting the CWCS
- drafting lists of species, habitats and threats
- identifying partners
- involving the public
- creating the agenda for Working Group meetings

The group consists of the Program Manager for DC Fisheries and Wildlife, the Fisheries Research Branch supervisor, the Aquatic and Wildlife Education Branch supervisor, fisheries and wildlife biologists, aquatic and wildlife educators and the DC Fisheries and Wildlife grants coordinator.

The group met formally and informally as necessary.

#### ***Working Group***—local, state, federal and nongovernmental

The role of the Working Group is to coordinate data regarding species of greatest conservation need, priority habitats, threats, conservation actions, and monitoring protocols. The Working Group was central to the planning process and data collection. Integrating the expertise and existing programs of other agencies and organizations from the region ensures that the most efficient and successful strategies are implemented.

The group consists of DC Fisheries and Wildlife and other federal, state, local conservation agencies and organizations, as well as NGOs, including:

- 1) Federal— provided species and habitat data
  - National Park Service (NPS )
  - US Geological Survey (USGS )
  - US Fish and Wildlife Service (USFWS)
  - US Department of Agriculture (USDA)

2)

State— helped create consistency in terms of criteria and format and introduced the National Heritage Program data

- Maryland Department of Natural Resources (MD DNR)

3) NGO— provided guidance on developing criteria and format

- MD-DC Audubon
- DC Audubon
- The Nature Conservancy
- Defenders of Wildlife
- International Association of Fish and Wildlife Agencies (IAFWA)
- Natural Heritage Program

**Table 2. Working Group participants and their affiliations**

<b>Participant</b>	<b>Affiliation</b>	<b>Participant</b>	<b>Affiliation</b>
Ira Palmer	DC Fisheries and Wildlife Division (DC FWD)	Shawn Carter	NPS—Center for Urban Ecology
Mary Pfaffko	DC FWD, DC Audubon	Richard Hammerschlag	US Geological Survey (USGS)—Patuxent Wildlife Research Center
Dhananjaya Katju	DC FWD, DC Audubon	Mary Paul	USGS—Patuxent Wildlife Research Center
Jon Siemien	DC FWD	Deanna Dawson	USGS—Patuxent Wildlife Research Center
Michael Kaspar	DC FWD, DC Audubon	Dan Murphy	US Fish and Wildlife Service
Sylvia Whitworth	DC FWD	Susan Greeley	US Department of Agriculture—National Arboretum
Basil Buchanan	DC FWD	Glenn Therres and staff	MD Natural Heritage Program
Susan Rudy	National Park Service (NPS)—National Capital Parks East	Judy Soule and staff	NatureServe
Ken Ferebee	NPS—Rock Creek Park	Doug Samson	The Nature Conservancy
James Rosenstock	NPS—National Capital Parks East	Dave Curson	MD-DC Audubon
Marcus Koenen	NPS—Center for Urban Ecology	Dave Chadwick	International Association of Fish and Wildlife Agencies (IAFWA)
Scott Bates	NPS—Center for Urban Ecology	Jeff Lerner	Defenders of Wildlife

## Public Involvement Summary

As required by Element #8, the public will be involved in both the development and implementation of the CWCS. This section describes the role of several different sectors of the District's public in the development phase. Chapter 9 describes the role of the public in the implementation phase of the CWCS.

### Educators and Students

Before CWCS planning efforts began, the Aquatic and Wildlife Education Branch of DC Fisheries and Wildlife was engaging the public in fish and wildlife conservation via education and training efforts. The Branch staff trained fish and wildlife educators and taught District residents. Programs include fishing clinics and classroom activities at the Aquatic Resources Education Center (AREC). This provides a solid foundation from which to involve the public upon implementing the conservation actions of the CWCS.

### Conservation NGOs

Early in the CWCS planning effort, DC Fisheries and Wildlife Division staff engaged NGOs with an interest in wildlife conservation. These NGOs were invited to be members of the Working Group. Some of these groups were familiar with conservation planning and had helped other states develop their CWCSs. They commented and advised on both the content and format of the CWCS during the development phase of the CWCS.

### General Public

The general public was provided an opportunity to be involved in the development of the CWCS at two public comment meetings. During these meetings, the public was invited to review the list of species of greatest conservation need and conservation actions. Both meetings were advertised via targeted emails to several conservation organizations and a draft CWCS was made available before each meeting. In terms of the implementation stage of the CWCS, the public will be invited to volunteer to perform various conservation actions such as bird surveys and habitat restoration.

**Table 3. Level of public involvement in the development of the CWCS**

Level of involvement	Type of activity	NGOs	Educators and Students	General Public
Inform	Meetings	X	X	X
Involve	Comments/Feedback	X	X	X
Collaborate	Data sharing/Project coordination	X		

## Selecting and Ranking Species

With funds from the State Wildlife Grants Program, the District will be able to focus on conserving species that have not traditionally received federal funding. To develop conservation actions for these species, Congress mandated the District to develop and implement the CWCS for “species of greatest conservation need.” The District was granted the authority to develop the selection process used to identify its species of greatest conservation need.<sup>23</sup> The list includes all wildlife taxa: birds, mammals, reptiles, amphibians, fish and invertebrates.

Before identifying species of greatest conservation need, the District’s CWCS Working Group compiled a comprehensive list of all wildlife species occurring currently or historically within the District. From this list, species of greatest conservation need were identified. The Working Group developed a list of criteria to guide the selection of those species. The group based its criteria on the set of criteria used by Teaming with Wildlife (TWW), given that TWW spent a great deal of time developing their criteria and that their criteria were closely aligned with criteria used by local and regional organizations.

### *Selection Criteria:*

- a) The overall focus and scope of species includes the full array of wildlife species, including historically occurring species.
- b) Species with greatest conservation need shall be defined by:
  - a. Quantitative, concrete criteria:
    - i. Endangered, threatened, candidate species, including federally endangered species of Maryland that also occur in DC, species receiving National Heritage Program (NHP) combined global and state ranks of G4 and a low S rank.
    - ii. Imperiled species, including globally rare species receiving NHP ranks of G1-G3.
  - b. Subjective dependent upon subject matter expertise:
    - i. Declining species
    - ii. Endemic species
    - iii. Disjunct species
    - iv. Vulnerable species
    - v. Species with small, localized “at-risk” populations
    - vi. Species with limited dispersal
    - vii. Species with fragmented or isolated populations
    - viii. Species of special, or conservation, concern
    - ix. Focal species (keystone species, wide-ranging species, species with specific needs)
    - x. Indicator species
    - xi. “Responsibility” species (ie. species that have their center of range within a state).
    - xii. Conservation areas (eg. migratory stopover sites, bat roosts, maternity sites, etc.).

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<sup>23</sup> The authority for the DC Division of Fisheries and Wildlife to determine the selection criteria for species of greatest conservation need is given in first Required Element of this CWCS.

### ***Prioritization Process***

The criteria used by the District were modified slightly from the TWW criteria by the District's prioritization process. The Working Group often gave priority to those species that were:

- Listed by local and regional conservation agencies and organizations,
- Feasible to conserve, and
- Urban specialist species.

Prioritizing species listed by local and regional organizations added a local dimension that takes into account factors such as the breeding and migration status of the species. Furthermore, in light of the size and geographic location of the District, it is important to capture greater regional concerns and remain generally consistent with the neighboring states with which the District shares priority species and habitats. Therefore, the District prioritized species included on the lists of local and regional conservation agencies such as the DC Fisheries and Wildlife Division, National Park Service, US Fish and Wildlife Service, and the neighboring states of Maryland and Virginia.

However, because the District is relatively small and urban, it is more limited than other states in terms of conserving wildlife. The District is home to a limited number of habitat types and acreage that can make conserving a species unfeasible. Therefore, feasibility was a limiting factor included in the District's prioritization process. In order to make best use of funds, any species that was determined to be unfeasible to conserve was excluded from the list. On the other hand, because the District has a large number of urban habitats, it has many opportunities to affect urban specialists species. Therefore, any species that can use urban landscapes was given priority because the District should take responsibility for urban specialist species.

The final listing was made using the following scoring process:

1. All species listed by Rock Creek Park and National Capital Parks—East, or advised by the US Fish and Wildlife Service as species of greatest conservation need were included on the list. All fish species listed by DC Fisheries and Wildlife as species of greatest conservation need were also included on the list.
2. All species (except birds) that were listed by more than two agencies or organizations as species of greatest conservation need, or breeders that were listed by at least one agency or organization were included on the list. Agencies and organizations that were considered include:
  - Maryland Department of Natural Resources
  - Virginia Department of Game and Inland Fisheries
  - Endangered Species Act
  - National Heritage Program
  - American Fisheries Society
  - Atlantic States Marine Fisheries Commission



3. For birds, all species listed by more than five agencies or organizations as species of greatest conservation need were included. Agencies and organizations include:
  - Maryland Department of Natural Resources
  - Virginia Department of Game and Inland Fisheries
  - Endangered Species Act
  - National Heritage Program
  - Partners in Flight Conservation Plan for the mid-Atlantic Piedmont
  - Partners in Flight Landbird Conservation Plan
  - North American Waterbird Conservation Plan
  - North American Waterfowl Management Plan
  - Breeding Bird Survey

The list of species of greatest conservation need is located in Chapter 5. The list of species and their scores is located in Appendix 1.

## **Selecting and Ranking Habitats**

After identifying species of greatest conservation need, the Working Group divided those species into their habitat types and locations using data from DC Fisheries and Wildlife, US Fish and Wildlife Service, National Park Service, US Geological Survey, Partners in Flight, MD-DC Audubon, and DC Audubon. Priority habitats were chosen based on the expert opinion of the Working Group members. GIS maps were produced to locate those habitats and can be found in Chapter 5. Because the exact location of certain species is sensitive information and undisclosed to the public, the mapping of their habitats may be limited.

Habitat types are prioritized based on the following process:

- # species of greatest conservation need
- acreage
- habitats that have many potential conservation opportunities may be given weight during the implementation process

A table with the prioritized list of habitats is located in Chapter 5.

## Selecting and Ranking Threats

The conservation actions included in this CWCS are targeted at specific threats to habitats. The District's species of greatest conservation need and their habitats face considerable threats. The District is especially vulnerable to those threats caused by urbanization such as fragmentation and pollution. In fact, because the District's ratio of land area to human population, there are so many threats that it would be virtually impossible to address them all in one strategy. Thus, while all the threats are important and have been listed in this CWCS, in the interest of feasibility, only the worst threats were targeted. The Working Group developed a process to determine the top-ranking threats that would be feasible to address in this version of the CWCS.

The first step was to list and rank all of the threats to each of the priority habitat locations within the 13 habitat types. The resident experts within the Working Group determined the threats and ranked each threat as "high," "medium," or "low" according to their expert opinion.

The second step was to average the ranks across habitat types. These averages are arranged into two summary threat tables—one for terrestrial habitats and one for aquatic habitats and include all threats. As explained above, due to feasibility limitations, only the top five threats were targeted. Chapter 6 describes the top five highest-ranking threats across all habitats. Chapter 7 describes the conservation actions being taken for the top five highest-ranking threats for each habitat type.

## Programmatic Challenges

There can be many administrative and management challenges to implementing the conservation actions included in this CWCS. This section presents some of the obstacles that must be overcome before the District will be able to effectively implement its conservation actions.

### *Shared jurisdictions*

The DC Fisheries and Wildlife Division is responsible for the development and implementation of the CWCS for the entire District. However, the District's land is divided into many jurisdictions of agencies, organizations and private landowners. Thus, conservation actions must coordinate these land managers. Determining the role of each and serving everyone's interest presents a challenge to a coordinated conservation effort.

The District also shares habitat with the surrounding states and region. It is home to several stopover points for migratory species that spend their lives traveling across the region. Since their habitats cross borders, the District is affected by factors across those borders including air and water quality. Therefore, the District must coordinate with land managers of the region and attempt to address cross-border pollution issues.

### *Communication*

Communication among partners is essential. Communication helps, for example, to reduce redundancy in data collection and analysis. However, communication among a large group of agencies and organizations can be difficult. Moreover, these groups can have conflicting goals or fundamentally different approaches to conservation. While partnerships have been formed, the effort to maintain the partnerships will remain a challenge.

### *Information management*

Information management format preferences vary across agencies and organizations. The District's planning process has been one of integrating data from several different sources. For the most part, data sharing was facilitated because all partners used similar information management formats. However, this may not be the case when sharing data with other conservation managers across the region or the nation. In order to effectively coordinate with those conservation managers, standardization among data management formats should be established.